WHAT IS CLAIMED IS:

1. A data protection processing device comprising:

a determination unit which reads continuous digital data in sequence and determines whether or not the read digital data forms numerical values having a predetermined continuous pattern; and

a calculation unit which adds predetermined calculation values to or subtracts predetermined calculation values from either all of or a portion of a predetermined number of items of digital data that are continuous after digital data that is determined as a result of the determination by the determination unit to form numerical values having the predetermined continuous pattern.

2. The data protection processing device according to claim 1, wherein the calculation unit sequentially adds or subtracts calculation values of predetermined data patterns or byte patterns to or from digital data or byte data that is the object of the addition or subtraction.

3. The data protection processing device according to claim 1, further comprising:

a memory which stores information relating to the predetermined numerical values or the predetermined byte

code, information relating to the predetermined number of items, and information relating to the predetermined calculation values; and

an information altering unit which alters at least one from among the information relating to the predetermined numerical values or the predetermined byte code, the information relating to the predetermined number of items, and the information relating to the predetermined calculation values that are stored in the memory.

4. A data protection processing device comprising:

a holding unit which converts binary data input serially into byte data and temporarily holds the byte data;

a determination unit which sequentially reads the byte data from the holding unit and determines whether or not the read byte data forms a predetermined byte code;

a calculation unit which adds predetermined calculation values to or subtracts predetermined calculation values from either all of or a portion of a predetermined number of items of byte data that are continuous after byte data that is determined as a result of the determination by the determination unit to form the predetermined byte code; and

an output unit which converts byte data calculated by the calculation unit into binary data and serially outputs

the binary data.

5. The data protection processing device according to claim 4, wherein the calculation unit sequentially adds or subtracts calculation values of predetermined data patterns or byte patterns to or from digital data or byte data that is the object of the addition or subtraction.

6. The data protection processing device according to claim 4, further comprising:

a memory which stores information relating to the predetermined numerical values or the predetermined byte code, information relating to the predetermined number of items, and information relating to the predetermined calculation values; and

an information altering unit which alters at least one from among the information relating to the predetermined numerical values or the predetermined byte code, the information relating to the predetermined number of items, and the information relating to the predetermined calculation values that are stored in the memory.

7. A data protection processing device comprising:

a first determination unit which sequentially reads transmission data or received data forming continuous

digital data and determines whether or not the read transmission data or received data contains digital data having a predetermined numerical value;

a first calculation unit which adds predetermined calculation values to or subtracts predetermined calculation values from either all of or a portion of a predetermined number of items of digital data that are continuous after the digital data having the predetermined numerical value when it is determined by the first determination unit that the transmission data or received data contains digital data having a predetermined numerical value;

a second determination unit which sequentially reads transmission data or received data forming continuous digital data and determines whether or not the read transmission data or received data contains digital data having a predetermined numerical value; and

a second calculation unit which subtracts the predetermined calculation values from or adds the predetermined calculation values to either all of or a portion of a predetermined number of items of digital data that are continuous after the digital data having the predetermined numerical value when it is determined by the second determination unit that the transmission data or received data contains digital data having a predetermined

numerical value.

8. The data protection processing device according to claim 7, wherein the first and second calculation units sequentially add or subtract calculation values of predetermined data patterns or byte patterns to or from digital data or byte data that is the object of the addition or subtraction.

9. The data protection processing device according to claim 7, further comprising:

a memory which stores information relating to the predetermined numerical values or the predetermined byte code, information relating to the predetermined number of items, and information relating to the predetermined calculation values; and

an information altering unit which alters at least one from among the information relating to the predetermined numerical values or the predetermined byte code, the information relating to the predetermined number of items, and the information relating to the predetermined calculation values that are stored in the memory.

10. A modem device comprising:

a data compression unit which performs data

compression processing on digital data to be transmitted based on a normalized data compression standard;

a first determination unit which converts digital data that has undergone data compression processing by the data compression unit into byte data, sequentially reads the converted byte data, and determines whether or not the read byte data forms a predetermined byte code;

a first calculation unit which adds predetermined calculation values to or subtracts predetermined calculation values from either all of or a portion of a predetermined number of items of byte data that are continuous after byte data that is determined as a result of the determination by the first determination unit to form the predetermined byte code;

a first output unit which outputs the byte data added or subtracted in the first calculation unit;

a second determination unit which converts received digital data into byte data, sequentially reads the converted byte data, and determines whether or not the read byte data forms a predetermined byte code;

a second calculation unit which adds the predetermined calculation values to or subtracts the predetermined calculation values from either all of or a portion of a predetermined number of items of byte data that are continuous after byte data that is determined as a result

of the determination by the second determination unit to form the predetermined byte code; and

a data decompression unit which converts byte data subtracted or added in the second calculation unit into digital data and performs data decompression processing on the converted digital data based on the data decompression standard.

11. The modem device according to claim 10, wherein the first and second calculation units sequentially add or subtract calculation values of predetermined data patterns or byte patterns to or from digital data or byte data that is the object of the addition or subtraction.

12. The modem device according to claim 10, wherein the modem device further comprises:

a memory which stores information relating to the predetermined numerical values or the predetermined byte code, information relating to the predetermined number of items, and information relating to the predetermined calculation values; and

an information altering unit which alters at least one from among the information relating to the predetermined numerical values or the predetermined byte code, the information relating to the predetermined number of items,

and the information relating to the predetermined calculation values that are stored in the memory.

13. A data communications system comprising:

a data transmitting device; and

a data receiving device which receives data transmitted by the data transmitting device,

wherein the data transmitting device includes

a first determination unit which reads transmission data in sequence and determines whether or not the read data includes digital data having a predetermined numerical value;

a first calculation unit which adds predetermined calculation values to or subtracts predetermined calculation values from either all of or a portion of a predetermined number of items of digital data that are continuous after the digital data having the predetermined numerical value when it is determined by the first determination unit that the data contains digital data having a predetermined numerical value; and

a transmitting unit which transmits data that has undergone calculation processing by the first calculation unit, and

wherein the data receiving device includes

a receiving unit which receives data transmitted

by the data transmitting unit;

a second determination unit which reads in sequence data received by the data receiving unit and determines whether or not the read data includes digital data having the predetermined numerical value; and

a second calculation unit which adds the predetermined calculation values to or subtracts the predetermined calculation values from either all of or a portion of the predetermined number of items of digital data that are continuous after the digital data having the predetermined numerical value when it is determined by the second determination unit that the data contains digital data having a predetermined numerical value.

14. The data communications system according to claim 13, wherein the data transmitting device and data receiving device are connected to each other via a network such as the Internet.

15. The data communications system according to claim 13, wherein the first and second calculation units sequentially add or subtract calculation values of predetermined data patterns or byte patterns to or from digital data or byte data that is the object of the addition or subtraction.

16. The data communications system according to claim 13, wherein the data transmitting device and data receiving device further comprising:

a memory which stores information relating to the predetermined numerical values or the predetermined byte code, information relating to the predetermined number of items, and information relating to the predetermined calculation values; and

an information altering unit which synchronizes the data transmitting device and data receiving device and alters at least one from among the information relating to the predetermined numerical values or the predetermined byte code, the information relating to the predetermined number of items, and the information relating to the predetermined calculation values that are stored in the memory.

17. A data protection processing method comprising:

a reading step of reading in sequence continuous digital data;

a determination processing step of determining whether or not digital data read in the reading step forms numerical values having a predetermined continuous pattern; and

a calculation processing step of adding predetermined calculation values to or subtracting predetermined calculation values from either all of or a portion of a

predetermined number of items of digital data that are continuous after digital data that is determined as a result of the determination in the determination processing step to form numerical values having the predetermined continuous pattern.

18. The data protection processing method according claim 17, wherein, in the calculation processing step, calculation values of predetermined data patterns or byte patterns are sequentially added to or subtracted from digital data or byte data that is the object of the addition or subtraction.

19. The data protection processing method according to claim 17, further comprising an information altering step of altering at least one of information relating to the predetermined numerical values or the predetermined byte code, information relating to the predetermined number of items, and information relating to the predetermined calculation values.

20. A data protection processing method comprising:

a reading step of converting binary data input serially into byte data and reading the byte data in sequence;

a determination processing step of determining whether or not the byte data read in the reading step forms a

predetermined byte code;

a calculation processing step of adding predetermined calculation values to or subtracting predetermined calculation values from either all of or a portion of a predetermined number of items of byte data that are continuous after byte data that is determined as a result of the determination in the determination processing step to form the predetermined byte code; and

an output step of converting byte data calculated in the calculation processing step into binary data and serially outputs the binary data.

21. The data protection processing method according claim 20, wherein, in the calculation processing step, calculation values of predetermined data patterns or byte patterns are sequentially added to or subtracted from digital data or byte data that is the object of the addition or subtraction.

22. The data protection processing method according to claim 20, further comprising an information altering step of altering at least one of information relating to the predetermined numerical values or the predetermined byte code, information relating to the predetermined number of items, and information relating to the predetermined calculation values.

23. A data protection processing method comprising:

a holding step of converting binary data input serially into byte data and temporarily holding the converted byte data in respective predetermined data frames;

a data extraction processing step of extracting a portion of the byte data forming the predetermined data frames held in the holding step to serve as data for processing;

a determination processing step of sequentially reading from the data extraction processing step the byte data forming the data for processing and determining whether or not the read byte data forms a predetermined byte code;

a calculation processing step of adding predetermined calculation values to or subtracting predetermined calculation values from either all of or a portion of a predetermined number of items of byte data that are continuous after byte data that is determined as a result of the determination in the determination processing step to form the predetermined byte code;

a data frame reconstruction processing step of reconstructing the predetermined data frames using byte data calculated in the calculation processing step; and

an output step of converting the data frames reconstructed in the data frame reconstruction processing

step into binary data and serially outputting the binary data.

24. The data protection processing method according claim 23, wherein, in the calculation processing step, calculation values of predetermined data patterns or byte patterns are sequentially added to or subtracted from digital data or byte data that is the object of the addition or subtraction.

25. The data protection processing method according to claim 23, further comprising an information altering step of altering at least one of information relating to the predetermined numerical values or the predetermined byte code, information relating to the predetermined number of items, and information relating to the predetermined calculation values.

26. A data protection processing method comprising:

a reading step of sequentially reading transmission data or received data forming continuous digital data;

a first determination processing step of determining whether or not the transmission data or received data read in the reading step contains digital data having a predetermined numerical value;

a first calculation processing step of adding

predetermined calculation values to or subtracting predetermined calculation values from either all of or a portion of a predetermined number of items of digital data that are continuous after the digital data having the predetermined numerical value when it is determined in the first determination processing step that the transmission data or received data contains digital data having a predetermined numerical value;

a second determination processing step of sequentially reading received data or transmission data forming continuous digital data and determining whether or not the read received data or transmission data contains digital data having a predetermined numerical value; and

a second calculation processing step of adding predetermined calculation values to or subtracting predetermined calculation values from either all of or a portion of a predetermined number of items of digital data that are continuous after the digital data having the predetermined numerical value when it is determined in the second determination processing step that the received data or transmission data contains digital data having a predetermined numerical value.

27. The data protection processing method according to claim 26, wherein, in the first and second calculation

processing steps, calculation values of predetermined data patterns or byte patterns are sequentially added to or subtracted from digital data or byte data that is the object of the addition or subtraction.

28. The data protection processing method according to claim 26, further comprising an information altering step of altering at least one of information relating to the predetermined numerical values or the predetermined byte code, information relating to the predetermined number of items, and information relating to the predetermined calculation values.

29. A data protection processing method comprising:

a first reading step of converting transmission data or received data in the form of serially input binary data into byte data and sequentially reading the byte data;

a first determination processing step of determining whether or not the byte data read in the first reading step forms a predetermined byte code;

a first calculation processing step of adding predetermined calculation values to or subtracting predetermined calculation values from either all of or a portion of a predetermined number of items of byte data that are continuous after byte data that is determined as a result

of the determination in the first determination processing step to form the predetermined byte code;

a first output step of converting byte data added or subtracted in the first calculation processing step into binary data and serially outputting the binary data as transmission data or received data;

a second reading step of converting received data or transmission data in the form of serially input binary data into byte data and sequentially reading the byte data;

a second determination processing step of determining whether or not the byte data read in the second reading step forms the predetermined byte code;

a second calculation processing step of adding the predetermined calculation values to or subtracting the predetermined calculation values from either all of or a portion of a predetermined number of items of byte data that are continuous after byte data that is determined as a result of the determination in the second determination processing step to form the predetermined byte code; and

a second output step of converting byte data added or subtracted in the second calculation processing step into binary data and serially outputting the binary data as received data or transmission data.

30. The data protection processing method according to

claim 29, wherein, in the first and second calculation processing steps, calculation values of predetermined data patterns or byte patterns are sequentially added to or subtracted from digital data or byte data that is the object of the addition or subtraction.

31. The data protection processing method according to claim 29, further comprising an information altering step of altering at least one of information relating to the predetermined numerical values or the predetermined byte code, information relating to the predetermined number of items, and information relating to the predetermined calculation values.

32. A data protection processing method comprising:

a first holding step of converting transmission data or received data in the form of serially input binary data into byte data and temporarily holding the converted byte data in respective predetermined data frames;

a first data extraction processing step of extracting from the first holding step a portion of the byte data forming the predetermined data frames to serve as data for processing;

a first determination processing step of sequentially reading from the first data extraction processing step the

byte data forming the data for processing and determining whether or not the read byte data forms a predetermined byte code;

a first calculation processing step of adding predetermined calculation values to or subtracting predetermined calculation values from either all of or a portion of a predetermined number of items of byte data that are continuous after byte data that is determined as a result of the determination in the first determination processing step to form the predetermined byte code;

a first data frame reconstruction processing step of reconstructing the predetermined data frames using byte data calculated in the first calculation processing step;

a first output step of converting the data frames reconstructed in the first data frame reconstruction processing step into binary data and serially outputting the binary data as transmission data or received data;

a second holding step of converting received data or transmission data in the form of serially input binary data into byte data and temporarily holding the converted byte data in respective predetermined data frames;

a second data extraction processing step of extracting from the second holding step a portion of the byte data forming the predetermined data frames to serve as data for processing;

a second determination processing step of sequentially reading from the second data extraction processing step the byte data forming the data for processing and determining whether or not the read byte data forms a predetermined byte code;

a second calculation processing step of adding the predetermined calculation values to or subtracting the predetermined calculation values from either all of or a portion of a predetermined number of items of byte data that are continuous after byte data that is determined as a result of the determination in the second determination processing step to form the predetermined byte code;

a second data frame reconstruction processing step of reconstructing the predetermined data frames using byte data subtracted or added in the second calculation processing step; and

a second output step of converting the data frames reconstructed in the second data frame reconstruction processing step into binary data and serially outputting the binary data as received data or transmission data.

33. The data protection processing method according to claim 32, wherein, in the first and second calculation processing steps, calculation values of predetermined data patterns or byte patterns are sequentially added to or

subtracted from digital data or byte data that is the object of the addition or subtraction.

34. The data protection processing method according to claim 32, further comprising an information altering step of altering at least one of information relating to the predetermined numerical values or the predetermined byte code, information relating to the predetermined number of items, and information relating to the predetermined calculation values.